

Energy

Increase Use of Renewable Energy

Target(s):

Meet the Lincoln Electric System's projected demand growth through 2016 with sustainable generation and demand reduction resources.

Lincoln Now:

Local government entities, working with municipal and other utilities, are striving to increase utilization of renewable energy sources such as wind power, hydropower, solar energy, biomass, and geothermal energy. Energy providers such as the Lincoln Electric System (LES) and Black Hills Energy are working to purchase and deliver to local customers a higher percentage of energy from renewable sources.

In December, 2011, the LES Administrative Board passed a resolution to meet LES' five-year projected energy demand growth with "sustainable generation" and "demand reduction resources." The LES administrative board recommended "a comprehensive approach to sustainability that includes a variety of strategies including, but not limited to, decreasing system demand through energy efficiency and conservation and investing in renewable energy projects." Under this plan, the projected growth in energy demand of 68 MW from 2011 through 2016 is targeted to be satisfied through a variety of conservation, efficiency, and renewable resource options and projected carbon dioxide emissions is targeted to be reduced by 435,000 tons. For example, "sustainable generation" such as electricity generated by local landfill gas will create 3.6 MW of power by 2016.

LES has long been involved in this commitment to renewable energy. During 2011, LES included more renewable energy in its power generating portfolio, including an additional 23 MW of wind energy from the Nebraska Public Power District, and through a 20 year agreement with the City of Lincoln to purchase and convert methane gas retrieved from the Bluff Road Landfill to electric energy. It is estimated the landfill gas project, slated to go into effect in 2013, will provide power equivalent to the electrical usage of 2,250 local households. Future collection of additional landfill gas, and additional increases in power generation, is planned until the landfill reaches capacity.

In addition, LES has expanded its encouragement and support of cost effective, small power production of renewable electricity by customer-owned qualifying generators, including solar photovoltaic and wind. Owners of these types of systems that have a production capacity limit of 100 kilowatts or less are allowed to either (1) sell the entire electrical output of their qualifying facilities to LES, or (2) use the electrical output of their qualifying facilities to instantaneously

supply all or a portion of their own load and sell the instantaneous surplus, if any, to LES ("net metering"). LES provides rates for purchasing all or excess energy delivered to the system that are nondiscriminatory and in the public interest. At the end of the billing period, the metered energy delivered to LES is subtracted from the metered energy supplied by LES. Other applicable fees and charges, including the customer and demand charge of the retail rate, are billed to the customer. On March 1, 2012, qualifying renewable facilities received an increase in this "buy back" payment per kilowatt hour, from 2.3 or 2.8 cents per kilowatt hour (winter/summer) to 4.7 cents per kilowatt hour for the excess energy delivered to the LES system during the billing period. As of June, 2012, 22 ratepayers are generating electricity and selling the surplus to LES (15 with solar arrays, 7 with small wind turbines).

In addition, customers who install solar photovoltaic and wind generators now may qualify for a one-time "capacity payment" of up to \$500 per kilowatt of peak demand reduced. The total amount customers can receive is determined by the generator's projected demand-reducing impact anticipated during LES' system peak.

LES and the City of Lincoln have also been directly promoting and installing these smaller solar and wind installations. For example, in 2011, TMCO and LES installed the first commercial, dual-axis, solar tracking photovoltaic system in Lincoln. The City of Lincoln installed a rooftop photovoltaic system on the new Jayne Snyder Activity Center in Union Plaza, and later in 2012 will be installing a similar 7 to 10 kilowatt system on the Police Station at 27th and Holdrege Streets.